DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 87TVP01 Issue Date: October 2, 2002
Application No. 87 Expiration Date: November 1, 2007

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, Marathon Oil Company, for the operation of the Kenai Gas Field Pad 34-31.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

This Operating Permit becomes effective November 2, 2002.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
C.F.R. .....Code of Federal Regulations
COMS .....Continuous Opacity Monitoring System
dscf.....Dry standard cubic feet
EPA .....US Environmental Protection Agency
gr./dscf.....grain per dry standard cubic feet (1 pound = 7000 grains)
GPH.....gallons per hour
HAPs .....Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID.....Source Identification Number
kPa.....kiloPascals
MACT .....Maximum Achievable Control Technology
NESHAPs.....Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 C.F.R. 61]
NSPS.....Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
ppm.....Parts per million
PS .....Performance specification
PSD .....Prevention of Significant Deterioration
RM.....Reference Method
SIC. .....Standard Industrial Classification
SO_2.....Sulfur dioxide
TPH .....Tons per hour
TPY .....Tons per year
VOC .....volatile organic compound [as defined in 18 AAC 50.990(103)]
wt%.....weight percent
ppmvd ……..parts per million by volume, dry

Section 1. Identification

Names and Addresses

Permittee:	Marathon Oil Company P.O. Box 196168 Anchorage, AK 99519-6168
Facility: Physical Address:	Kenai Gas Field Pad 34-31 60^0 28' N, 151^0 16'W Section 31,T5N; R11W; Seward Meridian Kenai Peninsula Borough, Alaska
Owner:	Marathon Oil Company P. O. Box 196168 Anchorage, AK 99519-6168
Operator:	Marathon Oil Company P. O. Box 196168 Anchorage, AK 99519-6168
Permittee's Responsible Official:	John A. Barnes Alaska Business Unit Manager Marathon Oil Company P. O. Box 196168 Anchorage, AK 99519-6168 Phone:(907) 564-6400 Fax: (907) 564-6489
Designated Agent:	CT Corporation System (Marathon Oil Company) 810 W. 10th Street, Suite 300 Juneau, AK 99801 Phone (907)586-3340
Facility and Building Contact:	Donald R. Erwin, Field Operations Supervisor 34090 Kalifornsky Beach Road Kenai, Alaska 99611 Phone (907) 283-1303 Fax (907) 283-6175
Fee Contact:	Donna M. Stevison HES Manager Marathon Oil Company P. O. Box 196168

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Original Permit Preparation

Hoefler Consulting Group
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Anchorage, Alaska 99508
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SIC Code of the Facility:

1311 - Crude Petroleum & Natural Gas [18 AAC 50.350(b), 1/18/97]

Section 2. General Emission Information

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Particulate Matter (PM-10), Sulfur Oxides (SO_2), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC).

Operating Permit Classifications:

1. **18 AAC 50.325(b)(1).** The Kenai Gas Field 34-31 site is a facility subject to this regulation because the plant emits or has the potential to emit 100 tons per year (tpy) or more of a regulated air contaminant under 18 AAC 50.015.
2. **18 AAC 50.325(b)(3).** The Kenai Gas Field 34-31 site is a facility subject to this regulation because the turbines, Source IDs 1 and 2 in Table 1 are subject to one of the New Source Performance Standards (NSPS) adopted by reference in 18 AAC 50.040(a)-(c).
3. **18 AAC 50.325(c).** The Kenai Gas Field 34-31 site is a facility subject to this regulation because the facility contains fuel-burning equipment, Source ID 16 with a rated capacity of 100 million Btu per hour or more, that is within the category described in 18 AAC 50.300(b) -(e).

[18 AAC 50.350(b), 1/18/97]

Section 3. Fee Requirements

1. **Assessable Emissions.** The Permittee shall pay to the department an annual emission fee based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminants that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

1.1 the facility's assessable potential to emit of 518 tpy; or

1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

1.3 other methods and calculations approved by the department**.**

[18 AAC 50.346(a)(1), 5/3/02 & 18 AAC 50.410, 1/18/97]

2. **Assessable Emission Estimates.** Emission fees will be assessed as follows:

2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Suite 303, Juneau, AK 99801-1795**;** the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates, or

2.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.2.

[18 AAC 50.346(a)(1), 5/3/02 & 18 AAC 50.410, 1/18/97]

Section 4. Source Inventory and Description

Sources listed in Table 1 below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

Table 1 - Source Inventory

ID	Source Name	Source Description	Rating/size	Install Date
1	IR A Compressor Drive	Allison 501-KC Turbine-A	5278 Hp	1984
2	IR B Compressor Drive	Allison 501-KC5 Turbine-B	5278 Hp	1984
6	Emergency Generator	Cummins NT-855-G2 diesel	175 kW	1987
14	Rig Boiler	Mobile Rig Boiler	4.5 MMBtu/hr	2000
15	Rig Heater	Mobile Rig Heater	2.2 MMBtu/hr	2001
16	Well Test Flare	Temporary Flare	100* MMCF/yr	1995
18	Glycol Dehydrator	Vent #5		1983
19	Glycol Dehydrator	Vent #6		1983

*****Owner Requested Limit

[18 AAC 50.350(d)(2), 1/18/97]

Section 5. Source-Specific Requirements

Fuel-Burning Equipment

Visible Emissions

3. Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source IDs 1, 2, 6, 14, 15 and 16 listed in Table 1 to reduce visibility through the exhaust effluent by either;

3.1 greater than 20 percent for a total of more than three minutes in any one hour[1], or

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

3.2 more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1), 5/3/02]

3.3 Monitor, record and report visible emissions in accordance with Section 13

[18 AAC 50.350(g) - (i), 5/3/02]

4. Particulate Matter Emissions. The Permittee shall not cause or allow particulate matter emitted from Source IDs 1, 2, 6, 14, 15 and 16 listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

Monitor, record and report according to Section 13.

[18 AAC 50.055(b) & 18 AAC 50.350(d)(1)(D), 1/18/97; & 18 AAC 50.350(g) – (i) & 18 AAC 50.346(c), 5/3/02]

5. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from Source IDs 1, 2, 6, 14, 15 and 16 in Table 1 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c) & 18 AAC 50.350(d)(1)(D); 1/18/97; 18 AAC 50.346(c), 5/3/02]

6. Sulfur Compound Emissions – Monitoring and Record Keeping.

Oil Fired Equipment: (Source IDs 6, 14 & 15)

6.1 The Permittee shall do one of the following for each shipment of fuel:

a. if the fuel grade requires a sulfur content less than 0.5% by weight, keep receipts that specify fuel grade and amount; or

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 19 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA. The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002 is approved by EPA into the SIP at which time this standard becomes federally enforceable.

b. if the fuel grade does not require a sulfur content less than 0.5% by weight, keep receipts that specify fuel grade and amount and

(i) test the fuel for sulfur content; or

(ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.

6.2 Fuel testing under condition 6.1 must follow an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the department.

6.3 If a load of fuel contains greater than 0.75% sulfur by weight, the Permittee shall calculate SO_2 emissions in PPM using either Section 14 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

[18 AAC 50.350(g) - (i) & 18 AAC 50.346(c), 5/3/02]

6.4 Gas-Fired Sources: (Source IDs 1, 2 & 16)

a. Obtain a semiannual statement or receipt from the fuel supplier certifying the fuel gas H_2S concentration in ppm. If a certificate is not available from the supplier, then analyze a representative sample of the fuel semiannually to determine the sulfur content using length-of-stain detector tubes per ASTM Methods D4810-88 and D4913-89.

[18 AAC 50.335(g), 1/18/97].

b. Record the H_2S concentration of the fuel gas required under condition 6.4a.

[18 AAC 50.350(h), 5/3/02]

7. Sulfur Compound Emissions – Reporting. The Permittee shall report in accordance with the following:

Oil Fired Equipment: Source IDs (6, 14 & 15)

7.1 If SO_2 emissions are calculated under 6.3 to exceed 500 ppm, the Permittee shall report according to condition 48. When reporting under this condition, include the calculation in Section 14

7.2 The Permittee shall include in the report required by condition

a. a list of the fuel grades received at the facility during the reporting period;

b. for any grade with a maximum fuel sulfur greater than 0.50% sulfur, the fuel sulfur of each shipment; and

c. for fuel with a sulfur content greater than 0.75%, the calculated SO_2 emissions in PPM.

[18 AAC 50.350(i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

7.3 Gas-Fired Sources: (Source IDs 1, 2 & 16)

a. Report under condition 48 whenever calculations of the concentration of SO_2 emissions exceed 500 ppm.

b. Attach copies of the records required by condition 6.4b with the operating reports required by condition 50.

[18 AAC 50.350(i), 1/18/97]

Federal New Source Performance Standards, Subpart A- Source IDs 1 and 2

8. NSPS Subpart A Performance Testing. The Permittee shall keep records of the initial performance tests and notifications for Source IDs 1 and 2 and any subsequent test(s) required by the department or by EPA. The tests shall be conducted using methods in 40 C. F. R. 60, Appendix A or other methods approved by EPA.

[18 AAC 50.040(a)(1), 1/18/97 & 18 AAC 50.350(g)-(i), 5/3/02]

9. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source IDs 1 and 2, any malfunctions of associated air-pollution control equipment, and any periods during which a continuous monitoring system or monitoring device for Source IDs 1 and 2 is inoperative.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.7(b), Subpart A, 7/1/93]

10. NSPS Subpart A, Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source IDs 1 and 2 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The department will determine whether acceptable operating and maintenance procedures are being used based on information available to the department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of Source IDs 1 and 2.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.11(d), Subpart A, 7/1/99]

11. NSPS Subpart A, Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in conditions 12 and 14. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1), 7/2/00]
[40 C.F.R. 60.12, Subpart A, 7/1/99]

Turbines Subject to NSPS Subpart GG (Source IDs 1 – 2)

12. NSPS Subpart GG NO_X Standard. The Permittee shall not allow the corrected exhaust gas concentration of NO_X in ppm from Source IDs 1 and 2 to exceed 150ppmvd when firing natural gas.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.332(a)(2), Subpart GG, 7/1/99]

13. NO_X Monitoring, Recordkeeping, and Reporting for GG Turbines.

13.1 **Waivers**. The Permittee shall provide to the department a written copy of any U.S. EPA granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules upon request by the department. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

13.2 **Periodic Testing**

a. **Initial Periodic Testing.** For each turbine subject to condition 12 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either condition 13.2a(i) or 13.2a(ii).

(i) For existing turbines not represented by emission data described in condition 13.2a(ii), the Permittee shall conduct a NO_X and O_2 source test under 40 C.F.R. 60, Appendix A-7, Method 20 within three years after issuance of this permit

(A) for each turbine, or

(B) on one turbine to represent a group of turbines, if allowed to do so under condition 13.3.

(ii) If a test following 40 C.F.R. 60, Appendix A-7, Method 20 or following another protocol approved by the department has been conducted on a turbine within two years before the issuance date of this permit, and the test shows that emissions at maximum load are less than 90 percent of the emission limit in condition 12, then

(A) the Permittee may use those test results to represent emissions from that turbine or for a group of turbines if allowed under condition 13.3 until the testing of condition 13.2a(ii)(B) is performed; and

(B) the Permittee shall conduct a Method 20 test on each turbine, or on one of a group of turbines as allowed under condition 13.3, within the 5 years of the permit term.

b. **Higher Tier Testing.** For each turbine with test results under condition 13.2a that are 90 % or more of the emission limit of condition 12, or for which emissions will equal or exceed 90% of the emission limit at maximum load, as shown through condition 13.4, the Permittee shall conduct an additional Method 20 test for the turbine within one year of the test under condition 13.2a. The Permittee shall conduct at least one additional test per year until at least two consecutive tests show that emissions for the turbine are less than 90 percent of the limit at loads up to maximum load.

13.3 **Substituting Test Data.** The Permittee may use a Method 20 test under conditions 13.2a or 13.2b performed on only one of a group of turbines to satisfy the requirements of those conditions for the other turbines in the group if

a. the Permittee demonstrates that test results are less than 90% of the emission limit of condition 12, and are projected under condition 13.4 to be less than 90% of the limit at maximum load;

b. for any source test done after the issuance date of this permit, the Permittee identifies in a source test plan under condition 40.

(i) the turbine to be tested;

(ii) the other turbines in the group that are to be represented by the test; and

(iii) why the turbine to be tested is representative, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical injectors and combustor; and

(C) uses the same fuel type; and

c. for any source test done before the issuance date of this permit and used under condition 13.2a(ii), the Permittee

(i) demonstrates why the test results are representative of emissions from the entire group of turbines, including that each turbine in the group

(A) is located at a facility operated and maintained by the Permittee;

(B) is the same make and model and has identical injectors and combustor;

(C) uses the same fuel type; and

(ii) submits all results of source testing that has been performed on each turbine in the group, regardless of the date of the test, and certifies that the submittal is complete, consistent with 18 AAC 50.205.

13.4 **Load**.

a. The Permittee shall conduct all tests under condition 13.2 in accordance with 40 C.F.R. 60.335(c)(3), except as otherwise approved in writing by the department, or by EPA if the circumstances at the time of the EPA approval are still valid. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and facility operating conditions in effect at the time of the test.

b. The Permittee shall demonstrate in the source test plan for any test performed after the issue date of this permit whether the test is scheduled when maximum NO_X emissions are expected.

c. If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,

(i) for each such turbine the Permittee shall provide to the department as an attachment to the source test report

(A) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and

(B) a demonstration based on the additional test information that projects the test results from condition 13.2 to predict the highest load at which emissions will comply with the limit in condition 12;

(ii) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit of condition 12;

(iii) the Permittee shall comply with a written finding prepared by the department that

(A) the information is inadequate for the department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load;

(B) the highest load at which the information is adequate for the department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or

(C) the Permittee must retest during a period of greater expected demand on the turbine; and

(iv) the Permittee may revise a load limit by submitting results of a more recent Method 20 test done at a higher load, and, if necessary, the accompanying information and demonstration described in condition 13.4c(i); the new limit is subject to any new department finding under condition 13.4c(iii)and

d. In order to perform a Method 20 emission test, the Permittee may operate a turbine at a higher load than that prescribed by condition 13.4c.

e. For the purposes of conditions 13.1 through 13.6, maximum load means the hourly average load that is the smallest of

(i) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;

(ii) the highest load allowed by an enforceable condition that applies to the turbine; or

(iii) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

13.5 **Recordkeeping**

a. The Permittee shall comply with the following for each turbine for which a demonstration under condition 13.4c does not show compliance with the limit of condition 12 at maximum load.

(i) The Permittee shall keep records of

(A) load; or

(B) as approved by the department, surrogate measurements for load and the method for calculating load from those measurements.

(ii) Records in condition 13.5a shall be hourly or otherwise as approved by the department.

(iii) Within one month after submitting a demonstration under condition 13.4c(i)(B) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a department finding under condition 13.4c(iii), whichever is earlier, the Permittee shall propose to the department how they will measure load or load surrogates, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent department direction on the load monitoring methods, equipment, or schedule.

b. For any turbine subject to condition 12 that will operate less than 400 hours in any 12 consecutive months, keep monthly records of the hours of operation. If a turbine that normally operates less than 400 hours exceeds that total during any 12 month period,

(i) test according to condition 13.2; or

(ii) if it is no longer possible to meet that schedule, test within one year of exceeding 400 hours in 12 consecutive months.

13.6 **Reporting**

a. In each facility operating report under condition 50 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under condition 13.4c

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under condition 13.5a during the period covered by the operating report.

b. In each facility operating report under condition 50 for each turbine for which condition 13.2 has not been satisfied because the turbine normally operates less than 400 hours in any 12 months, the Permittee shall identify

(i) the turbine;

(ii) the highest number of operating hours for any 12 months ending during the period covered by the report; and

(iii) any turbine that operated for 400 or more hours.

c. The Permittee shall report under condition 48 if

(i) a test result exceeds the emission standard;

(ii) Method 20 testing is required under condition 13.2 or 13.5b but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by conditions 13.4c(ii) and 13.4c(iii); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[18 AAC 350.220(a)-(c), 1/18/97 & 18 AAC 50.350(g)-(i), 5/3/02]
[18 AAC 50.040(a)(1), 7/2/00]
[Federal Regulation: 40 CFR 60.8(b), 7/1/99]

Fuel Sulfur Content

14. NSPS Subpart GG Sulfur Standard. The Permittee shall not allow the sulfur content for the fuel burned in Source IDs 1 and 2 to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.333(b), Subpart GG, 7/1/99]

14.1 Monitoring – Monitor compliance with the standard listed in condition 14 as required in condition 14.2.

[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.334 & 60.335, Subpart GG, 7/1/99]

14.2 The Permittee shall monitor the sulfur content of the natural gas using the length-of-stain detector tube protocol covered by ASTM Method D 4810-88 and D 4913-89.

[40 C. F. R. 60.334(b)(2), Subpart GG; 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

14.3 The length-of-stain tube method is approved as an alternative fuel sulfur test method for this custom fuel monitoring schedule, providing that the ASTM procedures are followed.

[40 C. F. R. 60.334(b)(2), Subpart GG; 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

14.4 If, after completion of biweekly monitoring during the first six months of operating under the EPA Alternative Fuel Monitoring Schedule, the fuel sulfur content monitoring results show little variability and there is consistent compliance with 40 C.F.R. 60.333, fuel sulfur content may be monitored on a semi-annual basis. This semi-annual monitoring shall be conducted during the first regular business day of the first and third calendar quarters.

[40 C. F. R. 60.334(b)(2), Subpart GG; 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

14.5 Should any fuel sulfur monitoring, as specified by condition 14.4 indicate noncompliance with 40 C.F.R. 60.333, the Permittee shall notify EPA and the Alaska Department of Environmental Conservation within 15 days of the occurrence(s). Fuel sulfur monitoring shall be conducted weekly during the interim period while the custom schedule is being re-examined by EPA.

[18 AAC 50.350(g)-(i), 5/3/02]
[40 C.F.R. 60.334(b)(2), Subpart GG, 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

15. The Permittee shall maintain records for all sulfur monitoring data for Source IDs 1-2.

15.1 The Permittee shall maintain a record documenting a constant supplier or source of fuel. A substantial change in fuel quality shall be considered as a change in fuel supply.

15.2 The Permittee shall maintain a record of all turbine operations on fuels other than pipeline quality gas.

15.3 All records shall be maintained on-site for a period of 5 years from the generation of such records.

[18 AAC 50.350(g)-(i),5/3/02]
[40 C.F.R. 60.334(b)(2), Subpart GG, 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

16. The Permittee shall annually report results of all sulfur monitoring.

16.1 The Permittee shall report any changes of supplier or source of fuel within 60 days of such a change.

16.2 The Permittee shall report use of any fuel other than 100% pipeline-quality natural gas within 60 days of such use.

[18 AAC 50.350(g)-(i), 5/3/02]
[40 C.F.R. 60.334(b)(2), Subpart GG 7/1/99]
[EPA Alternative Monitoring Schedule issued 9/22/98]

17. Report per condition 48 when the emission limit in condition 14 is exceeded.

[18 AAC 50.350(i), 7/2/00]
[18 AAC 50.040(a)(2)(V), 7/2/00]
[40 C.F.R. 60.333(a) & (b), Subpart GG, 7/1/99]

Section 6. Facility-Wide Requirements

PSD Avoidance Limits

The Permittee requested the limits in condition 18 in order to avoid classification as a Prevention of Significant Deterioration Major Facility.

Carbon Monoxide and Nitrogen Compound Emissions

18. The Permittee shall limit the facility emissions of carbon monoxide and nitrogen oxides to no more than 249 tons in any consecutive twelve-month by limiting the operations for Source IDs 1, 2, 6 and 16 as shown in Table 2:

Table 2 PSD Limited Sources

Source ID	Source Description	Limit in any consecutive 12-month period
1 and 2	Allison KC5 Turbines A and B	Turbines A and B not to exceed 16,220 hrs combined.
6	Emergency Generator-Cummins	200 Hr
16	Temporary Flare	100 MMCF gas

Owner Requested PSD Limits for Source IDs 1, 2, 6 and 16

[18 AAC 50.350(e)(3) & (f)(4), 1/18/97]

18.1 Maintain a monthly log for Source IDs 1 and 2 showing the current month fuel usage and the fuel burned in the previous consecutive twelve-month period.

[18 AAC 50.350(g)-(h), 5/3/02]

18.2 Maintain a monthly log for Source IDs 1, 2 and 6 showing the number of operating hours each month and the total hours in the previous consecutive twelve-month period.

[18 AAC 50.350(g)-(h), 5/3/02]

18.3 Maintain a monthly log for Source ID 16 showing the number of million cubic feet of gas burned each month and the total cubic feet burned in the previous consecutive twelve-month period.

[18 AAC 50.350(g)-(h), 5/3/02]

18.4 Submit summaries of the records of conditions 18.1, 18.2 and 18.3 with the semi annual operating report in condition 50.

[18 AAC 50.350(i), 1/18/97]

18.5 Report under condition 48 whenever the hours of operation of Source IDs 1, 2 or 6 exceed the limits in condition 18.

[18 AAC 50.350(i), 1/18/97]

18.6 Report under condition 48 whenever the gas consumption of Source ID 16 exceeds the fuel volume limit in condition 18.

[18 AAC 50.350(i), 1/18/97]

Section 7. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, reporting, and recordkeeping for insignificant sources that the department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement, except that the requirements of conditions 48 and 50 do not apply to this section.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

19. For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

19.1 the Permittee shall submit the compliance certifications of condition 51 based on reasonable inquiry;

19.2 the Permittee shall comply with the requirements of condition 30;

19.3 the Permittee shall report in the operating report required by condition 50 if a source listed in condition 19, because of actual emissions less than the thresholds of 18 AAC 50.335(r), has actual emissions greater than any of those thresholds;

19.4 no other monitoring, recordkeeping, or reporting is required.

[18 AAC 50.346(b)(1), 5/3/02]

20. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from insignificant sources to reduce visibility through the exhaust effluent by either;

20.1 greater than 20 percent for a total of more than three minutes in any one hour[2], or

[18 AAC 50.050(a)(2) & 18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

20.2 more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1), 5/3/02]

21. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

[2] See footnote 1

22. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97 & 18 AAC 50.350(m)(3), 6/2198]

Section 8. Generally Applicable Requirements

23. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

24. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

25. Good Air Pollution Control Practice. The Permittee shall do the following for Sources IDs 6, 14, 15 and 16:

25.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

25.2 Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format;

25.3 Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.346(b)(2), 5/3/02]
[18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

26. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

27. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk material to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d) & 18 AAC 50.350(d)(1), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

27.1 The Permittee shall keep records of

a. complaints received by the Permittee and complaints received by the department and conveyed to the Permittee; and

b. any additional precautions that are taken

(i) to address complaints described in condition 27.1a or to address the results of department inspections that found potential problems; and

(ii) to prevent future dust problems.

27.2 The Permittee shall report according to condition 30.

[18 AAC 50.350(g) – (i) & 18 AAC 50.346(c), 5/3/02]

28. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g), 1/18/97]

29. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility.

29.1 Open burning of asphalt, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(b) & 18 AAC 50.350(d)(1), 1/18/97]

29.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or particulate matter is prohibited.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(c) & 18 AAC 50.350(d)(1), 1/18/97]

29.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(d) & 18 AAC 50.350(d)(1), 1/18/97]

29.4 Open burning is prohibited in an area if the department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(e) & 18 AAC 50.350(d)(1), 1/18/97]

29.5 When conducting open burning, the Permittee shall ensure that

a. the material is kept as dry as possible through the use of cover or dry storage;

b. before igniting the burn, noncombustibles are separated to the greatest extent practicable;

c. natural or artificially induced draft is present;

d. to the greatest extent practicable, combustibles are separated from grass or peat layer;

e. combustibles are not allowed to smolder; and

f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the department, submit copies of the records.

[18 AAC 50.040(e), 7/2/00; 18 AAC 50.065(a) & 18 AAC 50.350(d)(1), 1/18/97 & 18 AAC 50.350(g) – (h), 5/3/02]

30. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72]

31. Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited.

31.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 48.

31.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 30.

31.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of condition 30; or

b. the department notifies the Permittee that it has found a violation of condition 30.

31.4 The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 30; and

d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

31.5 With each facility operating report under condition 50, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

31.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.350(h) – (i) & 18 AAC 50.346(a)(2), 5/3/02]

32. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard[3] listed in conditions 23 and 24, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emission reporting under condition 48 requires information on the steps taken to minimize emissions. The report required in condition 48 is adequate monitoring for compliance with this condition.

[18 AAC 50.235(a) & 18 AAC 50.350(f)(3), 1/18/97]

33. Permit Renewal. To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than May 1, 2006 and no later than May 1, 2007 to renew this permit.

[18 AAC 50.335(a), 1/18/97]

[3] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 9. General Source Testing and Monitoring Requirements

34. Requested Source Tests. In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

35. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing as follows:

35.1 At a point or points that characterize the actual discharge into the ambient air; and

35.2 At the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & 18 AAC 50.350(g), 1/18/97]

36. Reference Test Methods. Except as otherwise specified in this permit, the Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

36.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00, 18 AAC 50.220(c)(1)(A) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, 7/1/99]

36.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 18 AAC 50.220(c)(1)(B) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 61, 12/19/96]

36.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00; 18 AAC 50.220(c)(1)(C) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, 7/1/99]

36.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 13.

[18 AAC 50.030, 12/30/00; 18 AAC 50.220(c)(1)(D) & 18 AAC 50.350(g), 1/18/97]

36.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00 18 AAC 50.220(c)(1)(E) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, Appendix A, 7/1/99]

36.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[`18 AAC 50.035, 7/2/00; 18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 51, Appendix M, 7/1/99]

36.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with Method 301 in Appendix A to 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00, 18 AAC 50.220(c)(2) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

37. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 70° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 18 AAC 50.350(g) & 18 AAC 50.990(88), 1/18/97]

38. Test Exemption. The Permittee is not required to comply with conditions 40, 41 and 42 when the exhaust is observed for visible emissions by Method 9 Plan (condition 62.1) or Smoke/No Smoke Plan (condition 62.2).

[18 AAC 50.345(a), 5/3/02]

39. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/3/02]

40. Test Plans. Except as provided in condition 38, before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 34 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/3/02]

41. Test Notification. Except as provided in condition 38, at least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/3/02]

42. Test Reports. Except as provided in condition 38, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in condition 44. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(a) & (o), 5/3/02]

43. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in conditions 4 and 21, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

44. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. When certifying a compliance certification, the official's signature must be notarized.

[18 AAC 50.205 and 50.350(b)(3) & (j), 1/18/97; and 18 AAC 50.345(a) & (j), 5/3/02]

45. Submittals. Unless otherwise directed by the department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

46. Information Requests. The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by this permit. The department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200 & 50.350(b)(3), 1/18/97; and 18 AAC 50.345(a) & (i) & 50.350(g) – (i), 5/3/02]

47. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including

47.1 Copies of all reports and certifications submitted pursuant to this section of the permit.

47.2 Records of all monitoring required by this permit, and information about the monitoring including

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. sampling dates and times of sampling or measurements;

c. the operating conditions that existed at the time of sampling or measurement;

d. the date analyses were performed;

e. the location where samples were taken;

f. the company or entity that performed the sampling and analyses;

g. the analytical techniques or methods used in the analyses; and

h. the results of the analyses.

[18 AAC 50.350(h), 5/3/02]

48. Excess Emission and Permit Deviation Reports.

48.1 Except as provided in condition 30, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 48.1c(ii) and 48.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 48.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

48.2 When reporting excess emissions, the Permittee must report using either the department's online form, which can be found at www.dec.state.ak.us/awq/excess/report.asp, or, if the Permittee prefers, the form contained in Section 15 of this permit. The Permittee must provide all information called for by the form that is used.

48.3 When reporting a permit deviation, the Permittee must report using the form contained in Section 15 of this permit. The Permittee must provide all information called for by the form.

48.4 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

49. NSPS and NESHAP Reports. The Permittee shall:

[18 AAC 50.040 & 50.350(i)(2), 1/18/97; and 40 C.F.R. 60 & 61, 7/1/99]

49.1 attach to the facility operating report required by condition 50, copies of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 as required by conditions 15, 16, 18, and 23; and

49.2 upon request by the department, notify and provide a written copy of any EPA granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

50. Operating Reports. During the life of this permit, the Permittee shall submit to the department an original and two copies of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

50.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

50.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 50.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. when excess emissions or permit deviations have already been reported under condition the Permittee may cite the date or dates of those reports.

50.3 The operating report must include a listing of emissions monitored under condition 62 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

[18 AAC 50.346(b)(3), 5/3/02 and 18 AAC 50.350(d)(4), (f)(3) & (i), 1/18/97]

51. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

51.1 For each permit term and condition set forth in Section 3 through Section 13, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;

b. state whether compliance is intermittent or continuous; and

c. briefly describe each method used to determine the compliance status; and

d. notarized the responsible official's signature.

[18 AAC 50.205, 1/18/97 & 50.345(a) & (j), 5/3/02]

51.2 Submit a copy of the report directly to the U.S. EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 11. Standard Conditions Not Otherwise Included in the Permit

52. The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

52.1 an enforcement action,

52.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

52.3 denial of an operating-permit renewal application.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (c), 5/3/02]

53. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (d), 5/3/02]

54. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (e), 5/3/02]

55. Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

55.1 included and specifically identified in the permit, or

55.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (b), 5/3/02]

56. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (f), 5/3/02

57. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (g), 5/3/02]

58. The Permittee shall allow an officer or employee of the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

58.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept,

58.2 have access to and copy any records required by the permit,

58.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and

58.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.350(b)(3), 1/18/97 & 18 AAC 50.345(a) & (h), 5/3/02]

Section 12. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the Department not to be applicable to the Kenai Gas Field Pad 34-31.

Table 4 – Permit Shields Granted identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

59. If any of the requirements listed in Table 3 become applicable during the permit term, the Permittee shall comply with such requirements on a timely basis by obtaining a construction permit or an operating permit revision.

[18 AAC 50.350(l), 1/18/97]

Table 3 - Permit Shields Granted

Source ID	Non Applicable Requirements	Reason for non-applicability
Source IDs 1 and 2	40. C. F. R. 60 Subparts 60.7(a)(1), (a)(2), (a)(3), (a)(5), (a)(7) and 60.8	One-time only and startup notifications
Source IDs 1 and 2	40 C. F. R. 60 Subpart 60.332, 60.332(a)(1), 75 ppm Std for NO_X	Standard applies to electric utility turbines > 100 MMBtu/hr
Source IDs 1 and 2	40 C. F. R. 60 Subparts 60.334(a), 60.334(c)(1)	Standards apply only to turbines using water injection to control NO_X
Source IDs 1 and 2	40. C. F. R. 60 Subparts 60.332(a)(2), 150 ppmv NO_X during diesel firing mode.	Firing natural gas fired equipment on emergency fuel , including diesel fuel, is exempt per 40C.F.R.60.332(k)
Facility	40. C. F. R. 60 Subparts B, C, Ca, Cb, D, Da, Db, Dc, E, Ea, Eb, F, G, H, I, J, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z,	Not an affected facility, operation or industry
Facility	40. C. F. R. 60 Subparts AA, AAa, BB, CC, DD, EE, GG, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV, WW, XX	Not an affected facility, operation or industry
Facility	40 C.F.R. 60 Subparts AAA, BBB, DDD, FFF, GGG, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, and VVV	Not an affected facility, operation or industry
Facility	40 C.F.R. 61 Subparts B, C, D, E, F, H, I, J, K, L, N, O, P, Q, R, T, V, W, Y, BB and FF.	Not an affected facility, operation or industry

Source ID	Non Applicable Requirements	Reason for non-applicability
Facility	40 C.F.R. 63 Subparts A, B, F, G H, L, M, N, O, Q, R, T, W, X, EE, HH and HHH	Not an affected facility, operation, or industry
Facility	18 AAC 50.055(a)(2), Fuel Burning equipment standards, opacity emission limit of 30%, 3-minute average	No affected sources within facility
Facility	18 AAC 50.055(a)(4), (5) and (8), Fuel burning equipment standards, opacity emission limit of 20%, 6-minute average	No affected sources within facility
Facility	18 AAC 50.055(a)(6) and (7), Fuel burning equipment standards, opacity emission limit of 10%, 6-minute average	No affected sources within facility
Facility	18 AAC 50.055(b)(2) and (3), Fuel burning equipment standards, PM emission limit of 0.1 grains	No affected sources within facility
Facility	18 AAC 50.055(b)(4), Fuel burning equipment standards, PM emission limit of 0.15 grains	No affected sources within facility
Facility	18 AAC 50.055(b)(5) and (6), Fuel burning equipment standards, PM emission limit of 0.04 grains	No affected sources within facility
Facility	18 AAC 50.055(d) and (e), Fuel burning equipment standards	No affected sources within facility
Facility	18 AAC 50.060, Pulp Mills	Not an affected facility, operation or industry
Facility	18 AAC 50.070 Marine Vessels, visible emission standards	Not an affected facility, operation or industry
Facility	18 AAC 50.075, Wood fired heating device emission standards	No affected sources within facility
Facility	18 AAC 50.085 & 18 AAC 50.090 Volatile liquid storage tank emission standards	Regulations only apply to tanks within the Port of Anchorage

Section 13. Visible Emissions and Particulate Matter Monitoring Plan

For Gas Fired Sources (Source IDs 1, 2 and 16)

60. Visible Emissions: Monitoring, Record Keeping, and Reporting.

60.1 The Permittee shall use only natural gas as fuel in Source ID(s) 1, 2 and 16. The Permittee shall certify in each operating report required under condition 44 that the source burned only natural gas.

60.2 The Permittee shall report under condition 48 if any fuel is burned other than natural gas.

[18 AAC 50.350(g) – (i), & 18 AAC 50.346(c), 5/3/02]

61. Particulate Matter Emissions: Monitoring, Record Keeping, and Reporting. The Permittee shall comply with condition 60.

[18 AAC 50.350(g) – (i), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

For Liquid-Fired Sources (Source IDs 6, 14 and 15)

62. Visible Emissions Monitoring. The Permittee shall observe the exhaust of Source IDs 6, 14 and 15 for visible emissions using either the Method 9 Plan under condition 62.1 or the Smoke/No-Smoke Plan under condition 62.2. The Permittee may change visible emissions plans for a source at any time unless prohibited from doing so by condition 62.3.

[18 AAC 50.350(g), 1/18/97 & 18 AAC 50.346(c), 5/3/02]

62.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. Observe exhaust for 18 minutes within six months after the issue date of this permit or within 14 calendar days after changing from the Smoke/No-Smoke Plan of condition 62.2, whichever is later.

b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that a source operates.

c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under condition 62.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, observe emissions at least semiannually for 18 minutes.

Semiannual observations must be taken between four and seven months after the previous set of observations.

d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, observe emissions at least annually.

Annual observations must be taken between 10 and 13 months after the previous observations and must include at least three 18-minute sets of observations.

e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until the criteria in condition 62.1c for semiannual monitoring are met.

62.2 **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that a source operates.

b. Reduced Monitoring Frequency. After the source has been observed on 30 consecutive operating days, if the source operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that a source operates.

c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 62.1 or perform the corrective action required under condition 62.3

62.3 **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 62.2, then the Permittee shall either follow the Method 9 plan of condition 62.1; or

a. initiate actions to eliminate smoke from the source within 24 hours of the observation;

b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. after completing the actions required under condition 62.3a,

(i) take Smoke/No Smoke observations in accordance with condition 62.2

(A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and

(B) continue as described in condition 62.2b; or

62.4 if the actions taken under condition 62.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 62.3c(i)(A), then observe the exhaust using the Method 9 Plan unless the department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 62.2a.

63. Visible Emissions Record Keeping. The Permittee shall keep records in accordance with this condition.

[18 AAC 50.350(h) & 18 AAC 50.346(c), 5/3/02]

63.1 If using the Method 9 Plan of condition 62.1,

a. the observer shall record

(i) the name of the facility, emissions source and location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in this Section;

(ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in this Section; and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;

c. calculate and record the highest 18-consecutive-minute average observed.

63.2 If using the Smoke/No Smoke Plan of condition 62.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the department:

a. the date and time of the observation;

b. from Table 1 in Section 4, the ID of the source observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the source starts operation on the day of the observation, the startup time of the source;

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

64. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

64.1 include in each facility operating report under condition number 50:

a. which visible-emissions plan of condition 62 was used for each source; if more than one plan was used, give the time periods covered by each plan;

b. for each source under the Method 9 Plan,

(i) copies of the observation results (i.e. opacity observations) for each source that used the Method 9 Plan, except for the observations the Permittee has already supplied to the department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each source under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or record keeping required under conditions 62 and 63 that was not done;

64.2 report under condition 48:

a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and

b. if any monitoring under condition 62 was not performed when required, report within three days of the date the monitoring was required.

[18 AAC 50.350(h) & 18 AAC 50.346(c), 5/3/02]

65. Particulate Matter Monitoring. The Permittee shall conduct source tests on Source IDs 14 and 15 to determine the concentration of PM in the exhaust of Source IDs 14 and 15 as follows:

65.1 Conduct a PM source test according to the requirements set out in Section 9 no later than 90 calendar days any time corrective maintenance fails to eliminate visible emissions below the 15 percent and 20 percent opacity limits in condition 62.1e for two consecutive months.

65.2 The PM source test requirement in Condition 65.1 is waived for an emission unit if:

a. a PM source test during the most recent reporting period on that unit has shown compliance with the PM standard since permit issuance, or

b. if a follow-up visible emission observation conducted using Method-9 during the 90 days shows that the excess visible emissions described in conditions 62.1e and 65.1 no longer occur.

c. keep particulate matter monitoring records as required by condition 47.

[18 AAC 50.350(g)-(h), 5/3/02]

66. Particulate Matter Reporting

66.1 Include with the first facility operating report required by condition 50 copies of the records required under condition 65.

66.2 Report excess emissions, in accordance with condition 48, any time the results of a source test for PM exceeds 0.05 gr/dscf.

[18 AAC 50.350(i), 1/18/97]

67. Particulate Matter Monitoring for Diesel Engines and Liquid-Fired Turbines. The Permittee shall conduct source tests on diesel engines and liquid-fired turbines, Source ID 6, to determine the concentration of particulate matter (PM) in the exhaust of a source in accordance with this condition 67.

[18 AAC 50.350(g)-(h), 5/3/02]

67.1 Within six months of exceeding the criteria of condition 67.1a or 67.1b, either

a. conduct a PM source test according to requirements set out in Section 9; or

b. make repairs so that emissions no longer exceed the criteria of condition 67.2; to show that emissions are below those criteria, observe emissions as described in condition 62.1 under load conditions comparable to those when the criteria were exceeded.

67.2 Conduct the test according to condition 67.1 if

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the department has waived this requirement in writing.

67.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

67.4 The automatic PM source test requirement in conditions 67.1 and 67.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

68. Particulate Matter Record Keeping for Diesel Engines and Liquid-Fired Turbines. Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter of Source ID 6. Report the stack diameter in the next operating report under condition 50.

[18 AAC 50.350(g) – (i), 5/3/02]

69. Particulate Matter Reporting for Diesel Engines and Liquid-Fired Turbines. The Permittee shall report as follows:

69.1 report under condition 48

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of condition 67.2 was exceeded and the Permittee did not comply with either condition 67.1a or 67.1b, this must be reported by the day following the day compliance with condition 67.1 was required;

69.2 report observations in excess of the threshold of condition 67.1b, within 30 days of the end of the month in which the observations occur;

69.3 in each facility operating report under condition 50, include

a. the dates, Source ID(s), and results when an observed 18-minute average was greater than an applicable threshold in condition 67.2;

b. a summary of the results of any PM testing under condition 67; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 67.2, if they were not already submitted.

[18 AAC 50.346(c) & 50.350(g) – (i), 5/3/02]

Visible Emissions Observations for Flares (Source ID 16)

70. Visible Emissions Monitoring, Recordkeeping, and Reporting. The Permittee shall observe the first six flare events[4] occurring during the life of this permit[5].

70.1 Monitor flare events using Method-9.

70.2 Record the following information:

a. the flare(s) Source ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

d. date, beginning and ending time of event; and

e. volume of gas flared.

70.3 Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. Until monitoring has been completed on the six flare events described in this condition, the Permittee shall either monitor each qualifying flare event or include in the next report required by condition 50 an explanation of the reason the event was not monitored.

70.4 Attach copies of the records required by condition 70.2 with the facility operating report required by condition 50.

70.5 Report under condition 48 whenever the opacity standard in condition 3 is exceeded.

[18 AAC 50.350(g) – (i), 5/3/02]

[4] For purposes of this permit, a "flare event" is flaring of gas for greater than one hour as a result of scheduled lease operations, i.e. maintenance or well testing activities. It does not include non-scheduled lease operations, i.e. process upsets, emergency flaring, or de minims venting of gas incidental to normal operations.
[5] Flare events monitored within 12-months prior to permit effective date may count towards the six-event total.

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

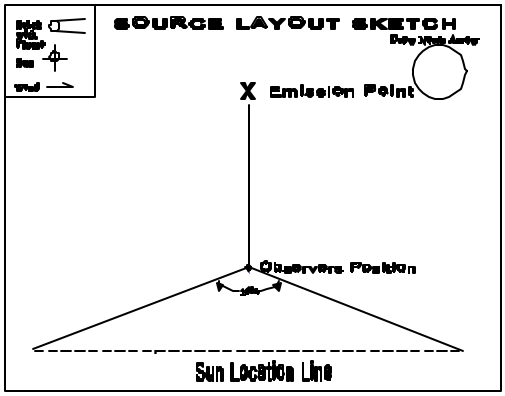
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate & Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____
Observer Signature

Data Reduction:
Duration of Observation Period (minutes) _____
Number of Observations _____
Number of Observations exceeding 20% _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 14. Material Balance Calculation

If the sulfur content of any fuel combusted is greater than 0.5% by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A = 31,200 X [**wt%S_{fuel}**] = 31,200 X _____ = _____

B = 0.148 X [**wt%S_{fuel}**] = 0.148 X _____ = _____

C = 0.396 X [**wt%C_{fuel}**] = 0.396 X _____ = _____

D = 0.933 X [**wt%H_{fuel}**] = 0.933 X _____ = _____

E = B + C + D = _____ + _____ + _____ = _____

F = 21 – [**vol%$_{dry}O_{2,\ exhaust}$**] = 21 - _____ = _____

G = [**vol%$_{dry}O_{2,\ exhaust}$**] ÷ F = _____ ÷ _____ = _____

H = 1 + G = 1 + _____ = _____

I = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ PPM

The **wt%S_{fuel}**, **wt%C_{fuel}**, and **wt%H_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 5. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,\ exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

Section 15. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Marathon Oil Company _____
Company Name

Kenai Gas Field Pad 34-31 _____
Facility Name

Reason for notification:

❑ **Excess Emissions** — *If you checked this box Fill out section 1*

❑ **Other Deviation from Permit Condition** — *If you checked this box fill out section 2*

When did you discover the Excess Emissions or Other Deviation:
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock)**:**

	START Time**:** (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply)**:**

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

Printed Name: Signature: Date:

Alaska Department of Environmental Conservation

Air Permits Program

October 2, 2002

Marathon Oil Company

Kenai Gas Field 34-31

STATEMENT OF BASIS

of the Terms and Conditions for

Permit No. 87TVP01

Prepared by Scott Bailey

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 87TVP01.

The Kenai Gas Field Pad 34-31 is a crude oil and gas production facility that provides natural gas for industrial and domestic use. The facility is owned and operated by Marathon Oil Company. Marathon Oil Company is the Permittee for the facility's operating permit.

PROCESS DESCRIPTION

As provided in the application, the facility contains two turbines, one emergency generator, a portable rig boiler, a portable rig heater, two glycol dehydrator vents and a temporary well test flare.

The sources at the facility regulated in Operating Permit 87TVP01 are identified in Table 1 Section 4 of the permit.

SOURCE INVENTORY AND DESCRIPTION

Section 4 of Operating Permit No. 87TVP01 contains Table 1 describing the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Table A. Emissions Summary

Pollutant	NO_x	CO	PM-10	SO_2	VOC	(HAPs) no fees req'd
Potential Emissions (TPY) per AS 46.14.990(21)	230	249	8	15	24	20
Assessable Potential to Emit (TPY) condition 1.1	230	249	0	15	24	0

The potential NO_X and CO emissions in Table A for Source IDs 1-2 are based on 1998 source tests. All other potential emissions of other significant air contaminants for Source IDs 1-2 are based on AP-42 emission factors

The assessable potential to emit is simply those regulated air contaminants for which the facility has the potential to emit quantities greater than 10 tons per year and reflect owner requested limits on Source IDs 1, 2 and 6.

BASIS FOR REQUIRING AN OPERATING PERMIT

Kenai Gas Field Pad 34-31 requires an operating permit because it has the potential to emit 100 tons per year (tpy) or more of a regulated air contaminant. Kenai Gas Field Pad 34-31 meets the definition of operating permit facility in the state regulations in Section 2.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to Kenai Gas Field Pad 34-31, the state regulations require a description of:

Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies [18 AAC 50.335(e)(4)(A)];

Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel Burning Equipment [18 AAC 50.335(e)(4)(C)];

Each source subject to a standard adopted by reference in 18 AAC 50.040 [18 AAC 50.335(e)(2)]; and

Sources subject to requirements in an existing DEC permit [18 AAC 50.335(e)(5)]

The emission sources at Kenai Gas Field Pad 34-31 classified as "regulated sources" according to the above DEC regulations are listed in Table 1 of Permit No. 87TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

No previous air quality control permit-to-operate exists for this facility.

Title-V Operating Permit Application History

The owner or operator submitted an application on October 14, 1997 and application amendments on October 12, 2000, July 6, 2001 and July 3, 2002.

COMPLIANCE HISTORY

The facility did not previously have an operating permit and therefore has no compliance history with the department.

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Conditions 1 – 2 General Emission Information and Fee Requirements

Applicability: [18 AAC 50.350(c) & 18 AAC 50.400 – 420, 1/18/97]

The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These conditions require the Permittee to pay fees in accordance with the department's billing regulations. The department's billing regulations set the due dates for payment of fees based on the billing date.

The conditions also set forth how the Permittee may recompute assessable emissions. If the Permittee does not choose to annually calculate assessable emissions, emissions fees may be paid based on "potential to emit."

As described in the last paragraph of Condition 5 of this Statement of Basis, the SO_2 PTE is based on diesel fuel with a 0.5% by weight sulfur content or fuel gas with a sulfur content of 4000 ppm H_2S by volume.

Condition 3 Visible Emissions Monitoring

Applicability: [18 AAC 50.055(a)(1), 1/18/97]

[18 AAC 50.350(d)(1)(C), 6/21/98]

[18 AAC 50.350(g) – (i), 5/3/02]

Heaters, flares and engines are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in Alaska.

Factual basis: The condition cites the state visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the heaters, flares and engines to violate this standard.

The monitoring, recordkeeping, and reporting requirements are listed in Section 13 of the permit. The requirements for the visible emission and particulate matter standards are combined in this section.

There are two options for monitoring visible emissions. One option requires the Permittee to observe visible emissions in accordance with the state reference test method (i.e. 40 C.F.R. 60, Method-9). The other option requires the Permittee to momentarily observe the exhaust for presence or absence of smoke. This latter option takes into account the difficulty and expense of getting certified readers to remote locations in Alaska.

Under the latter option, all sources are initially observed for the presence or absence of smoke in the exhaust for each of the first 30 operating days. Smoke is presumed to be absent if the exhaust exhibits less than 5 percent opacity. The department believes the initial 30 days is sufficient to capture all operating modes and to assure that the monitoring determines if the source complies with the visible emission standard. If smoke is absent during any 30 day operating period, the monitoring frequency is relaxed to one observation for every 30

days of source operation. The department believes monthly checks are sufficient to monitor for the presence of increased visible emissions that may result from degradation.

If the Permittee observes smoke in the exhaust, Particulate Matter Monitoring take action to eliminate visible emissions from the source within 24 hours of the observation. After completing the action, the Permittee continues to observe the exhaust for the presence or absence of smoke for 30 operating days. If smoke is observed during this 30-day period, the Permittee must take Method-9 opacity readings using the state reference test method within seven days after the visible emissions are observed.

The recordkeeping requirements consist of keeping records of the results of all visible emission observations and records of any actions taken to reduce visible emissions. The Permittee must report copies of the results of all observations done using the state reference test method with the facility operating reports. The Permittee must report emissions in excess of the state visible emission standard.

Condition 4 Particulate Matter Monitoring

Applicability: [18 AAC 50.055(b)(1), 1/18/97]

[18 AAC 50.350(d)(1)(C), 6/21/98]

[18 AAC 50.350(g) – (i), 5/3/02]

Heaters and engines are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition cites the state particulate-matter emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow heaters or engines to violate this standard.

Condition 5 Sulfur Compound Emissions

Applicability: [18 AAC 50.055(c), 1/18/97]

[18 AAC 50.350(d)(1)(C), 6/21/98]

[18 AAC 50.350(g) – (i), 5/3/02]

The condition applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition re-iterates a sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Diesel Fuel (Fuel Oil): Fuel oil sulfur is measured in weight percent sulfur. Calculations show that fuel containing no more than 0.5% sulfur will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. Verification of ASTM fuel grade as No. 1 or No. 2 fuel oil will certify compliance with the standard because these fuel oils always have a fuel sulfur content of no more than 0.5%. For fuels with a sulfur content higher than 0.75%, this condition requires the Permittee to use the equations in Section 14 to calculate the exhaust gas SO_2 concentration, showing whether the

standard was exceeded. The equations in Section 14 are all based on stoichiometric mass balance.[6]

Fuel Gas: Fuel gas sulfur is measured as hydrogen sulfide, i.e. H_2S concentration in ppm by volume. Calculations made by the department show that fuel gas containing no more than 4000 ppm H_2S will always comply with the exhaust emission standard of 500 ppm SO_2. This is true for all fuel gases, even with no excess air. Since the current H_2S concentration in the fuel gas, measured by a length-of-stain detector, is less than 1ppm the potential for exceeding the state emission standard during the current permit term is negligible.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10% of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Condition 8 NSPS Subpart A Performance Testing

Applicability: [18 AAC 50.040(a)(1), 1/18/97 & 18 AAC 50.350(g)-(i), 5/3/02]

[40 C.F.R. 60. Subpart A, 7/1/99]

Factual Basis: Condition 8 is the federal requirement applicable to Source IDs 1 and 2 because these sources are subject to NSPS 40 CFR 60 Subpart GG and therefore to the requirements are from 40 C.F.R. 60 Subpart A. The Permittee has completed the all the initial one time testing requirements pertaining to NSPS (Subparts A and GG) notification and testing. However, 40 CFR 60.7(a)(4) contains continuing requirements.

Conditions 9 – 11 NSPS Subpart A Requirements

Applicability: [18 AAC 50.040(a)(1) & 18 AAC 50.040(a)(2)(V), 7/2/00]

[40 C.F.R. 60. Subpart A, 7/1/99]

Factual Basis: Conditions 9- 11 require the maintenance of records of malfunctions of NSPS sources or pollution control or monitoring equipment. The conditions require that sources be operated in accordance with good air pollution control practices to minimize emissions. The conditions restate the prohibition against the use of gaseous diluents to achieve compliance with an opacity standard. All of these requirements are from 40 C.F.R. 60 Subpart A.

Condition 12 NSPS Subpart GG NO_X Standard

Applicability: [18 AAC 50.040(a)(2)(V), 7/2/00 and 18 AAC 350(g)–(i), 5/3/02]

[40 C.F.R. 60.332, 7/1/99]

Factual Basis: Turbines are affected facilities as classified in 40 C.F.R. 60.330, Subpart GG, Standards of Performance for Stationary Gas Turbines, if constructed, modified, or reconstructed after October 3, 1977 and have heat input ratings greater than 10.7 gigajoules heat input per hour based on lower heating value of the fuel. NSPS standards impose

[6] http://www.state.ak.us/dec/dawq/aqm/newpermit.htm

additional emission limits on the affected facility's SO_2 and NO_X emissions. Conditions 12 – 17 of the permit incorporate relevant portions of Subpart GG.

Standards for Nitrogen Oxides:

The turbines are subject to 40 C.F.R. 60.332(a)(2) because they are classified under 40 C.F.R. 60.330(b) as affected facilities with heat input loads greater than 10 MMBtu/hr (10.7 gigajoules/ hr) and less than 100 MMBtu/hr (107.2 gigajoules/hr), and modified after October 3, 1982.

The NSPS NO_X standard under 40 C.F.R. 60.332(a)(2) states that no owner or operator shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

$$STD = 0.015 * \frac{14.4}{Y} + F$$

Where: STD = allowable NO_X emissions, percent by volume at 15% O_2 and on a dry basis

Y = manufacturer's rated heat rate at manufacturer's rated peak load, kilojoules per watt hour, or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the affected facility. The value of Y shall not exceed 14.4 kilojoules per watt-hour.

F = NO_X emission allowance for fuel-bound nitrogen, percent by volume, assumed to be zero for Alaskan fuels.

The most restrictive NO_X emission limit for the turbines is 150 ppmvd at 15% O_2 (using a manufacturer's heat rate at a maximum of 14.4 kJ/W hr).

Condition 13 NO_X Monitoring, Recordkeeping, and Reporting for GG Turbines

Applicability: [18 AAC 50.350(g)-(i), 5/3/02]

[18 AAC 50.220(a)-(c), 1/18/97]

[Federal Regulation: 40 CFR 60.8(b), 7/1/99]

Periodic monitoring is included in condition 13. This additional monitoring is necessary to ensure that turbine emissions stay below the NSPS NO_X standard.

Factual Basis: The department does not have enough information to make categorical determinations that certain types of turbines, or turbines with emission test results below a certain percentage of the Subpart GG NO_X emission limit will inherently comply with the Subpart GG limit at all times and will never need additional testing. After a sufficient body of NO_X data is gathered under monitoring conditions for compliance with 40 C.F.R. 60, Subpart GG, the department may find that it has enough information to make such categorical determinations. In that event, the department would revise the NO_X monitoring

conditions. The department may determine that to assure compliance it is necessary to retain or increase the current monitoring frequency.

These conditions do not include the initial NSPS performance test requirements. If a turbine under this permit is still subject to the performance test requirement of 40 C.F.R. 60.8, a source specific condition will be necessary.

The intent of these conditions is that turbines or groups of turbines be initially tested on a 5-year cycle. If no testing is required during the permit term, and if the same condition were used in the renewal permit initial testing could be on 10-year testing cycle. After the first testing cycle, the department intends to re-evaluate the necessary monitoring frequency.

The condition does not state how load must be measured. For some turbines it may be possible to directly measure load as either mechanical or electrical output. For others, it may be necessary to calculate load indirectly based on measurements of other parameters. The department is not attempting to dictate what method is most appropriate through the permit condition, but should evaluate the adequacy of methods of calculating load based on the load monitoring proposed by the Permittee.

Subpart GG defines “emergency gas turbine” and exempts turbines meeting that definition from the GG emission standards. Some turbines may be operated as standby equipment but not meet the definition of emergency turbine, so the department has added a Method 20 monitoring threshold of 400 hours per 12 month. For turbines expected to operate less than 400 hours the department has also added recordkeeping for hours of operation. The department does not intend to require the Permittee to operate a turbine solely for the purpose of testing.

The condition requires testing at a range of loads, consistent with the performance test requirements in Subpart GG, that is, test at 30, 50, 75, and 100% load. If testing at these four loads is not reasonable, the condition allows the Permittee to propose to the department what test loads will be reasonable and adequate, and the department will have the responsibility to make a finding on that proposal. If EPA has already approved alternative test loads for the initial performance test the department would allow those test loads if the information that went into that decision were still representative of the turbine operation.

In condition 13.3c(i)(C) the department considers “fuel type” to mean, for liquid fuels a type of fuel as described in an ASTM or similar fuel specification.

Load measurements or load calculations from load surrogate measurements are for one-hour periods. The intent is to match the averaging period for the test method. Method 20 identifies a number of traverse points that vary with the size of the stack. From these points the tester is to choose at least 8 points for NO_X measurements. The time at each point is to be at least one minute plus the average response time of the instrument. The recorded value is the average steady state response. Presumably, the steady state response would exclude some or all of the response time of the instrument. Three runs are to be done at each test load.

The three runs would represent 24 minutes of measurement time or more. A one-hour average load is therefore a reasonable approximation of a load period corresponding to the test method.

Condition 14 NSPS Subpart GG Sulfur Standard

Applicability: [18 AAC 50.040(a)(2)(V), 7/2/00]

[40 C.F.R. 60.333, 7/1/99]

[40 C.F.R. 60.8, 7/1/99]

Factual Basis: Affected turbines are subject to the SO_2 standards as stated in 40 C.F.R. 60.333. The owner or operator shall not discharge gases into the atmosphere from a stationary gas turbine with SO_2 in excess of 0.015% by volume (150 ppmvd) at 15% O_2 and on a dry basis, or no owner or operator shall burn fuel with greater than 0.8% sulfur by weight.

Permit condition 14 sets the frequency of fuel sulfur and nitrogen determinations. It incorporates the applicant's fuel sulfur limit with NSPS monitoring, reporting, and testing requirements and incorporates the terms granted the Permittee in an alternative custom monitoring plan by US EPA on September 23, 1998.

The Permittee shall maintain records of all sulfur monitoring data for five years as set out in 18 AAC 50.350(h)(5). The applicant shall maintain records documenting the fuel supplier or source. A substantive change in fuel quality shall be considered as a change in fuel supply.

The Permittee shall determine compliance with the sulfur dioxide standard per 40 C.F.R. 60.335(d). The Permittee shall use methods described in this section—ASTM D 4810-88 and D 4913-89 or EPA-approved alternative. The applicant may use fuel analysis performed by owner/operator, service contractor, fuel vendor, or other qualified agency pursuant to 60.335(f).

The conditions incorporate Federal test methods by reference.

Conditions 15 – 16 Recordkeeping and Reporting-EPA Alternative Monitoring Plan for Sulfur Emissions

Applicability: [18 AAC 50.350 (g)-(i), 5/3/02]

[40 C.F.R. 60.334(b)(2), 7/1/99]

Factual Basis: Conditions 15 and 16 reflect the record keeping and reporting terms granted the Permittee in an alternative custom monitoring plan by US EPA on September 23, 1998.

Condition 17 Excess Sulfur Emissions

Applicability: [18 AAC 50.040(a)(2)(V), 7/2/00 & 18 AAC 50.350(i), 1/18/97]

Factual Basis: Condition 17 requires the Permittee to report excess emissions.

Condition 18 PSD Avoidance Limits

Applicability: [18 AAC 50.350(e)(3) & (f)(4), 1/18/97 & 18 AAC 50.350(g)-(i), 5/3/02]

Factual Basis: Condition 18 was proposed by the Permittee in order to avoid classification as a PSD major facility. The hour limits on Source IDs 1 and 2 will limit the amount of NO_X and CO emissions the facility discharges to no more than 249 tons of either

pollutant in any consecutive twelve-month period. The maximum NO_X concentration in the exhaust for Source IDs 1 and 2 is the NSPS limit of 150 ppmv at 15 % O_2.

Conditions 19 – 22 Insignificant Sources

Applicability: These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.055 (a), 18 AAC 50.055 (b)(1), and 18 AAC 50.055 (c)(1) as amended on May 3, 2002.

Factual basis: The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50. The department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance under condition 19.

Condition 19 requires certification that the sources did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. The general emission standards in conditions 20 through 22 apply to all industrial process fuel-burning equipment.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

The conditions re-iterate the general standards and require some compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards.

Condition 23 Asbestos NESHAP

Applicability: [18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]

[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

If the Permittee engages in asbestos demolition and renovation, then these requirements may apply.

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee engages in asbestos demolition or renovation. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 24 Refrigerant Recycling and Disposal

Applicability: [18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]

[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 25 Good Air Pollution Control Practice

Applicability: [18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

[18 AAC 50.346(b), 5/3/02]

Factual basis: Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate much more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Records should be kept and available to the department. Records of deferred maintenance can be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the Permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or don't relate to minimizing emissions, the Permittee can see that they are changed as a condition of purchase for existing equipment.

Condition 26 Dilution

Applicability: [18 AAC 50.045(a), 1/18/97]

Applies to the Permittee because the Permittee must comply with emission standards in 18 AAC 50.

Factual Basis: The requirement prohibits diluting emissions as a means of compliance. The underlying regulation is 18 AAC 50.045(a). The requirement prohibits diluting emissions as a means of compliance. In practical terms, dilution only affects compliance when the emissions are being measured. Careful reviews of source test plans and operating conditions should reveal any dilution as a result of the introduction of non-process air into the exhaust.

Condition 27 Reasonable Precautions to Prevent Fugitive Dust

Applicability: These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.

Factual Basis: The underlying regulations are 18 AAC 50.350 and 18 AAC 50.346. The department will use this standard condition in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.because the Permittee will engage in industrial activity at the facility.

Condition 28 Stack Injection

Applicability: [18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

Applies to the facility because the facility contains a stack or source modified after November 1, 1982.

Factual Basis: The condition restates the prohibition on stack injection (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 29 Open Burning

Applicability: Open burning regulations in 18 AAC 50.346 and 18 AAC 50.350 apply if the Permittee conducts open burning at the facility. The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

No specific monitoring is required for this condition. The permit does require the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 30, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

Condition 30 Air Pollution Prohibited

Applicability: These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.

Factual Basis: The underlying regulations are 18 AAC 50.110 and 18 AAC 50 346. The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Condition 32 Technology-Based Emission Standard

Applicability: [18 AAC 50.235(a) & 18 AAC 50.350(f), 1/18/97]

Technology Based Emission Standard requirements apply to the facility because the facility contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other "technologically feasible" determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of a technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 48.

Condition 33 Permit Renewal

Applicability: [18 AAC 50.335(a), 1/18/97]

Applies if the Permittee intends to renew the permit.

Factual Basis: The condition restates the regulatory deadlines, citing the specific dates applicable to the facility. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

Condition 34 Requested Source Tests

Applicability: [18 AAC 50.220(a) & 18 AAC 50.345(a)(10), 1/18/97]

Standard condition to be included in all permits.

Factual Basis: Condition requires the Permittee to conduct source tests as requested by the department, therefore no monitoring is needed. Conducting the requested source test is its own monitoring.

Conditions 35 – 37 Source Test Conditions, Reference Test Methods and Excess Air Requirements

Applicability: These state regulations apply because the Permittee is subject to the requirements in 18 AAC 50.

Factual Basis: The underlying regulations are 18 AAC 50.030, 18 AAC 040 and 18 AAC 50.220. These conditions restate regulatory requirements for source testing. As such, they supplement the specific monitoring requirements stated elsewhere in this permit. The tests reports required by later conditions adequately monitor compliance with these conditions, therefore no specific monitoring, reporting, or recordkeeping is needed. The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Conditions 38 Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 39 – 42 Test Deadline Extension, Test Plans, Notification and Reporting

Applicability: Apply because the Permittee is required to conduct source tests under 18 AAC 50 in this permit.

Factual Basis: Standard condition 18 AAC 50.345(a)(10) is incorporated through these four conditions – conditions 39 through 42. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. The test reports required by condition 42 adequately monitor compliance with conditions 40 through 42 therefore no additional MR&R requirements are necessary to ensure compliance with these conditions.

Condition 43 Particulate Matter (PM) Calculations

Applicability: [18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Applies when the Permittee tests for compliance with the particulate matter standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. The Permittee must use the equation given in this condition to calculate the PM emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no MR&R is required to ensure compliance with this condition.

Condition 44 Certification

Applicability: This is a standard condition in 18 AAC 50 to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the facility report, even though it must still be **submitted** more frequently than the facility operating report. This condition supplements the reporting requirements of this permit, therefore no additional MR&R is necessary to ensure compliance with this condition.

Condition 45 Submittals

Applicability: [18 AAC 50.350(i), 1/18/97]

Applies because the permit requires the Permittee to submit reports, and because the condition is a standard condition.

Factual Basis: This condition restates the regulatory requirement that all reports must be certified. To ease the certification burden, the condition allows the excess emission reports to be certified with the semi-annual operating report, although the excess emission reports must be submitted more frequently. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 46 Information Requests

Applicability: [18 AAC 50.200 & 18 AAC 50.350(b)(3), 1/18/97]

[18 AAC 50.350(g) – (i) & 18 AAC 50.345(i) 5/3/02]

Applies to all Permittees, and incorporates a standard condition

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 47 Recordkeeping Requirements

Applicability: [18 AAC 50.350(h), 5/3/02]

Applies to records required by a permit.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 48 Excess Emission and Permit Deviation Reports

Applicability: [18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97]

[18 AAC 50.346(c), 5/3/02]

Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition. Please note that there may be additional federally required excess emission reporting requirements.

Condition 49 NSPS and NESHAP Reports

Applicability: [18 AAC 50.040, 7/2/00 & 18 AAC 50.350(i)(2), 1/18/97]

[Federal Citation: 40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The permit does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 50 Operating Reports

Applicability: [18 AAC 50.350(d)(4), 1/18/97]

[18 AAC 50.350(f)(3), 1/18/97]

[18 AAC 50.350(i), 1/18/97]

Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 51 Annual Compliance Certification

Applicability: [18 AAC 50.350(j), 1/18/97]

[18 AAC 50.350(d)(4), 1/18/97]

Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed.

Conditions 52 – 58 Standard Conditions Not Otherwise Included in the Permit

Applicability: [18 AAC 50.346, 5/3/02]

Applies to all operating permits.

Factual Basis: The underlying regulation is 18 AAC 50.346. These standard conditions meet the requirements under the Clean Air Act for demonstrating general compliance with a Title V permit. The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

Condition 59 Permit Shields Granted

Applicability: [18 AAC 50.350(l), 1/18/97]

Factual Basis: The permit conditions sets forth the requirements that the department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

Conditions 60 – 64 Visible Emission Monitoring and Reporting

Applicability: [18 AAC 50.350(d)(1)(C), 6/21/98; 18 AAC 50.055(b)(1), 1/18/97]

[18 AAC 50.350(g) – (i) & 18 AAC 50.346(c), 5/3/02]

Apply because these conditions detail the monitoring, recordkeeping, and reporting required in condition 3.

Factual Basis: The Permittee must establish by actual visual observations, which can be supplemented by other means, such as corrective maintenance, that the liquid fired equipment at the facility is in continuous compliance with the State's emission standards for visible emissions. The underlying regulation for these conditions is 18 AAC 50.346(c). The department will use these standard conditions in any operating permit unless the department determines that source or facility specific conditions more adequately meet the requirements of 18 AAC 50.

These conditions detail a stepwise process for monitoring compliance with the State's visible emission standard for liquid-fired equipment covered by these conditions. Monitoring increases in frequency depending on the results of the self-monitoring visible emissions in condition 60. A Method-9 plan or a smoke/no-smoke plan allows flexibility for the facility to show compliance. Corrective action conditions are included when monitoring using smoke/no-smoke observations. The recordkeeping and reporting for this monitoring are included in these conditions.

Conditions 65 – 69 Particulate Matter Monitoring and Reporting

Legal Basis: [18 AAC 50.055(b)(1), 1/18/97 & 18 AAC 50.350(g) – (i), 5/3/02]

[18 AAC 50.350(d)(1)(D), 6/21/98]

Apply because these conditions detail the monitoring, recordkeeping, and reporting required in condition 4 for liquid-fired equipment.

Factual Basis: The Permittee must establish by actual visual observations which can be supplemented by other means, such as corrective maintenance, that the facility is in continuous compliance with the State's particulate matter emission standards.

These conditions detail a stepwise process for monitoring compliance with the State's particulate matter standard for liquid-fired equipment types covered by these conditions.

The monitoring required for liquid-fired sources are detailed in these conditions. Monitoring increases in frequency depending on the results of the self-monitoring visible emissions in condition 60. Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded. Notification of the department through recordkeeping and reporting requirements are included in these conditions. A review of the previous two years of Operating Reports did not find any excess particulate matter emissions from Source IDs 6, 14 and15.

Condition 70 Visible Emission Observations for Flares

Legal Basis: [18 AAC 50.350(g) – (i), 5/3/02]

Applies because this condition details the monitoring, recordkeeping, and reporting required to demonstrate compliance with condition 3 for gas-fired flares.

Factual Basis: Condition 70 was developed to provide a standardized version of flare monitoring that is not dependant upon the type or design of upstream equipment. It has been claimed that gas-fired flares normally burn without emitting visible emissions, but actual field data demonstrating this assumption is not available. However, gas-fired flares have been shown to smoke when a control device, i.e. a knockout drum, flare scrubber, gas or steam assist, or vapor recovery system malfunctions. Thus, the condition sets out a protocol to collect actual field data to determine compliance with the 20% opacity standard for flares.

A recent department analysis of industry flaring operations indicates that 49% of the gas flared (by volume) is for pilot/purge, 25% is for flaring less than one hour, and 26% is for

flaring that lasts more than one hour. Pilot/purge flaring constitutes half of all flaring by volume and is continuous in nature and can be observed at any time. This type of flaring has not caused violations of the opacity standard in the past and can be checked at any time by agency inspectors. The remaining half of the flaring volume is split evenly between less than and greater than one-hour duration. Therefore, the monitoring scheme in this condition addresses the half of the non-continuous flaring operations that are scheduled and for which a certified observer can reasonably be located onsite.

Since it is impractical to require facilities to have a certified Method-9 opacity reader on site for unpredictable emergency flaring, the monitoring protocol requires Method-9 readings only during scheduled flare events. Scheduled events such as those generated by maintenance activities and well testing of greater than one-hour in duration will be observed. These one-hour events are currently quantified and reported to the Alaska Oil and Gas Conservation Commission for other reasons and thus provides a confirming information record of the occurrence of these events. Only those events as defined in the condition need to be monitored. If no events meeting this definition occur during the life of the permit then no monitoring is required.

Since only flaring that is scheduled and exceeds one hour is required to be observed operators will have time to provide certified Method-9 readers onsite. Most oil and gas production facilities in Alaska are located at remote sites so it is not reasonable to self-monitor all or even a large sample of the flaring that occurs. Data collected from planned events will help the department refine this monitoring scheme during future permit cycles. Process upsets and emergency events that may or may not exceed one hour occur randomly and do not lend themselves easily to periodic monitoring. At this time, the department will rely on facility excess emission reports, citizen complaints, and agency inspections for information concerning these short term and emergency events.